

IN THE DRAWINGS

The drawings are objected to because descriptive labels other than numerical are needed for Figures 1 and 4. Enclosed are Replacement Sheets for Figures 1 - 6 with descriptive labels.

REMARKS

This responds to the Office Action mailed on September 19, 2005, and the references cited therewith.

Claims 1-2, 12-14, 17-25 are amended, no claims are added, as a result, claims 1-25 are now pending in this application.

§101 Rejection of the Claims

Claims 1-19, and 22-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1, 12, 18, 19 and 24 have been amended to recite respective practical applications of the operations performed by the claimed methods (e.g., “to identify multimedia content”) and therefore, as amended, are directed to a statutory subject matter. (See MPEP Sec 2106; Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036.)

Claim 22, as amended, recites a method “to redirect a receiver of an information signal to an Internet website.” It is submitted that a practical application of the operations recited in claim 22 is to redirect a receiver of an information signal to an Internet website. Therefore, claim 22 is directed to a statutory subject matter.

Claim 23, as amended, recites a method “to determine the quality of an information signal.” It is submitted that a practical application of the operations recited in claim 22 is to determine the quality of an information signal. Therefore, claim 22 is directed to a statutory subject matter.

Thus, the rejections under §101 have been overcome and it is respectfully requested that the rejections be withdrawn.

§102 Rejection of the Claims

Claims 1-2 and 9-13 were rejected under 35 U.S.C. § 102(b) for anticipation by the article by Schneider (published by IEEE). Schneider is directed at a methodology for designing content based digital signatures that can be used to authenticate images. (Schneider, Abstract.) Specifically, Schneider describes using a color or intensity histogram **to sign** an image. In Schneider, an image is first divided into blocks, after which a histogram for each block is

computed separately so that the histograms of individual blocks have spatial information about the image intensities. The operation in Schneider of *dividing an image into a plurality of blocks* is different from first “dividing the information signal into frames” and then “dividing each frame of the information signal into disjoint bands or blocks,” as recited in claim 1, as amended. Thus, Schneider fails to disclose or suggest each and every element of claim 1, and therefore claim 1 and its dependent claims are patentable in view of Schneider and should be allowed.

In order to show the features of claim 12, the Office action cites the description of authenticating video sequences, where the still image authentication techniques can be applied to each frame of the video sequence (Schneider, section 6.0, p. 230). The still image authentication in Schneider involves decrypting the signature of the original image and comparing it to the hashed content extracted from the questionable image. The questionable image is declared unmanipulated if the distance between the feature vectors is less than a certain threshold value. (Schneider, section 5.0, p. 228.) Thus, in Schneider, it is not the extracted content that is being compared to the threshold, but rather *the difference between the feature vectors* (H0-H1). This is distinct from “**comparing the value of the extracted feature with a threshold,**” as recited in claim 12.

Furthermore, while Schneider discloses comparing the distance between the feature vectors to a threshold value, there is no mention in Schneider of “generating for each block a hash bit indicating whether the value of the extracted feature is larger or smaller than said threshold” or of “determining for each block reliability information indicating whether the value of the extracted feature differs substantially from said threshold,” as recited in claim 12.

Still further, claim 12 requires “combining said hash bits and said reliability information of the blocks into a hash value having reliable hash bits for which the extracted feature differs substantially from said threshold, and unreliable bits for which the extracted feature does not differ substantially from said threshold.” While Schneider discloses generating a second level hash, it merely mentions that a second level hash is generated by hashing the ordered sequence of hashed frames of a video. (Schneider, 6.0.) There is no suggestion in Schneider that the generating of the second level hash involves combining hash bits and reliability information, specifically, the hash bits indicating whether the value of the extracted feature is larger or smaller

than said threshold and reliability information indicating whether the value of the extracted feature differs substantially from the threshold, as required by claim 12. Also, there is no indication in Schneider that the second level cache of Fig. 8 has “*reliable hash bits* for which the extracted feature differs substantially from said threshold, and *unreliable bits* for which the extracted feature does not differ substantially from said threshold,” as recited in claim 12.

Thus, Schneider fails to disclose or suggest each and every element of claim 12, and therefore claim 12 and its dependent claims are patentable in view of Schneider and should be allowed.

Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Boles et al (U.S. 5,019,899). Boles is directed at an apparatus and method for creating digital signatures from frames of selected video segments. Boles, Abstract. Boles discloses *forming signatures* for every frame of a real time transmission (Boles, 4: 21-43), which is different from “*deriving a hash signal*” from a multimedia signal, as recited in claim 24. In fact Boles is totally silent on a deriving of any hash signal at all. Thus, Boles fails to disclose or suggest each and every element of claim 24, and therefore claim 24 and its dependent claim 25 are patentable in view of Boles and should be allowed.

§103 Rejection of the Claims

Claims 3-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Schneider in view of ISO/IEC specification.

As discussed above, Schneider, fails to disclose or suggest first “dividing the information signal into frames” and then “dividing each frame of the information signal into disjoint bands or blocks,” as required by claims 3-8 by virtue of their being dependent on claim 1. ISO/IEC specification, whether considered separately or in combination with Schneider, also fails to disclose or suggest these features. Thus, because Schneider and ISO/IEC specification combination fails to disclose or suggest each and every element of claims 3-8, claims 3-8 are patentable in view of Schneider and ISO/IEC specification combination and should be allowed.

Claims 14-21 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the article by Schneider in view of Boles et al.

The Office action states correctly that Schneider fails to disclose “selecting a hash word of said input block of hash words” or “searching said hash word in the database,” as required by claim 14. Schneider discloses calculating a difference between the decrypted signature of the original image and the hashed content extracted from the questionable image. Schneider fails to disclose, however, “calculating a difference between the input block of hash words and a stored block of hash words **in which the hash word has the same position as the selected hash word in the input block,**” as recited in claim 14. Furthermore, there is no indication in Schneider that the operations of selecting, searching and calculating are repeated for a further selected hash word **until said difference is lower than a predetermined threshold.**” Boles, whether considered separately or in combination with Schneider, also fails to disclose or suggest these features. Thus, because combining Schneider and Boles fails to disclose or suggest each and every element of claim 14, claim 14 is also patentable in view of Schneider and Boles combination and should be allowed.

Claim 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Boles. As discussed above, the operation of *forming signatures* for every frame of a real time transmission disclosed in Boles is distinct from “deriving a hash signal” from a multimedia signal, as required by claim 25 by virtue of its being dependent on claim 24. Thus, Boles fails to disclose or suggest each and every element of claim 25, and therefore claim 25 is patentable in view of Boles and should be allowed.

Claim 22 were rejected under 35 U.S.C. 102(b) as being unpatentable over Boles in view of Eichstaedt et al. (U.S. 6,654,735 B1). Claim 22 requires the feature of “**deriving a hash signal** from said information signal.,” which is not present Boles, as discussed above. Eichstaedt is directed at generating user interest profiles (Eichstaedt, Abstract) and also fails to disclose or suggest this feature, whether considered separately or in combination with Boles. Thus, because combining Eichstaedt and Boles fails to disclose or suggest each and every element of claim 22, claim 22 is patentable in view of Schneider and Boles and should be allowed.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at 408-278-4041 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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